

**NO. 22-2288**

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

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**APPLE INC.,**  
*Appellant,*

**v.**

**COREPHOTONICS, LTD.,**  
*Appellee.*

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**REPLY BRIEF OF APPELLANT APPLE INC.**

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**Appeal from the United States Patent and Trademark Office,  
Patent Trial and Appeal Board in No. IPR2020-00489**

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**CERTIFICATE OF INTEREST**

**Case Number** 22-2288

**Short Case Caption** Apple Inc. v. Corephotonics, Ltd.

**Filing Party/Entity** Apple Inc. / Appellant

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Date: July 28, 2023

Signature: /s/ Debra J. McComas

Name: Debra J. McComas

<b>1. Represented Entities.</b> Fed. Cir. R. 47.4(a)(1).	<b>2. Real Party in Interest.</b> Fed. Cir. R. 47.4(a)(2).	<b>3. Parent Corporations and Stockholders.</b> Fed. Cir. R. 47.4(a)(3).
Provide the full names of all entities represented by undersigned counsel in this case.	Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.	Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.
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Apple Inc.		

**4. Legal Representatives.** List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

☐ None/Not Applicable

☐ Additional pages attached

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**5. Related Cases.** Provide the case titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. Do not include the originating case number(s) for this case. Fed. Cir. R. 47.4(a)(5). See also Fed. Cir. R. 47.5(b).

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Corephotronics, Ltd. v. Apple Inc., 5:19-cv-04809 (N.D. Cal.)		

**6. Organizational Victims and Bankruptcy Cases.** Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

☒ None/Not Applicable

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## ARGUMENT

In emphasizing the comparative size of the two prior art references Golan and Kawamura, Corephotonics misses the point, just as it led the Board to do below. The Board not only erred substantively in reading Golan as limited to miniature cameras (which it is not) but also legally in considering the comparative camera size at all. Indeed, as this Court held in the recent decision of *Axonics, Inc. v. Medtronic, Inc.*, the Board commits fundamental and harmful error by “confining the motivation inquiry to whether a motivation would exist to make the proposed combination for use in [a] context to which the [challenged patent claims] are not limited.” --- F.4th ---, No. 2022-1451, 2023 WL4410686, at \* 5 (Fed. Cir. July 10, 2023). Here, the challenged claims are not limited to a specific-sized camera. For these reasons, the Board’s reliance on the comparative camera size between Golan and Kawamura—the basis of the Board’s finding of non-obviousness—was legal error that justifies reversal (or at least vacatur and remand) of the Final Written Decision.

**I. The Board’s obviousness analysis in this case is nearly identical to the one that this Court recently determined to be “infected by error” in *Axonics v. Medtronic* because it centers on contextual and size limitations in the prior art that are not present in the challenged claims.**

As noted in Apple’s opening appeal brief, in determining obviousness, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements *in the way the claimed invention does.*”

Opening Br. 60–61 (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007)) (emphasis added). In *Axonics*, this Court recently clarified this standard, vacating and remanding a final written decision that erroneously found no motivation to combine based on size and contextual differences between the prior art references that were not required by the challenged claims. 2023 WL4410686, at \* 5. Here, the Board committed the same error by resting the Final Written Decision on size and contextual differences between Golan and Kawamura that were not required by the challenged claims of the ’408 patent.<sup>1</sup>

More specifically, in *Axonics*, the invention was a stimulation lead to be implanted in a patient’s body. 2023 WL4410686 at \*1. The petitioner’s obviousness challenge rested on the combination of Young and Gerber. *Id.* at \*2. The implantable

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<sup>1</sup> This Court’s decision in *Axonics* was not issued until July 10, 2023, well after Apple filed its opening brief. Nonetheless, Apple repeatedly asserts in its opening brief that the Board erroneously relied upon the size comparison between Golan and Kawamura to the exclusion of Apple’s arguments supporting a motivation to combine the references in a way to achieve *the claimed invention*. See, e.g., Opening Br. 3 (Statement of the Issues), 51–52 (“[I]nstead of considering whether the teachings of the two references would have fairly suggested the combination [of Golan and Kawamura] to a POSITA in light of the motivations Apple presented, the Board dismissed Apple’s motivation arguments by erroneously focusing on the purported difference in size between Golan and Kawamura.”), 60–66 (outlining proper grounds for finding motivation to combine). Even if Apple had not challenged the Board’s improper emphasis on the comparative size of the references, however, a change or clarification of the law as articulated in *Axonics* would justify application of that standard here. See *L.E.A. Dynatech, Inc. v. Allina*, 49 F.3d 1527, 1531 (Fed. Cir. 1995); 19 *Moore’s Federal Practice*, § 205.05.

lead in Young was designed to stimulate the trigeminal nerve, while the implantable lead in Gerber was designed to stimulate the sacral nerve. *Id.* at \*3. The patent owner argued, and the Board agreed, that due to differing size constraints imposed by the trigeminal nerve and the sacral nerve, a POSITA would not have been motivated to combine the references because “such an arrangement would not be feasible.” *Id.* at \*4.

The Court concluded that the Board committed fundamental error in its obviousness analysis by “confining the motivation inquiry to whether a motivation would exist to make the proposed combination for use [in the prior art reference]” rather than in the claimed invention. *Id.* at \*5. The Court explained that “[t]he inquiry is not whether a relevant artisan would combine a first reference’s feature with a second reference’s feature to meet requirements of the first reference that are not requirements of the claims at issue.” *Id.* In other words, it is a “legally incorrect framing” to confine the motivation-to-combine question to a spatial constraint of one of the prior art references when that spatial constraint is not present in the challenged claims. *Id.* at \*6. Accordingly, this Court vacated the Board’s final written decision, explaining that the Board’s legally-erroneous framing of its motivation inquiry was not harmless. *Id.* at \*7.



Such is precisely the case here. At Corephotonics’s suggestion, the Board rested its decision on a legally-erroneous framing of the motivation inquiry relative to Golan and Kawamura based on a purported size limitation in Golan—a size limitation that is not found in the claims at issue. Claims 5 and 6 are silent as to the size of the camera, reciting “a zoom digital camera comprising: a) a first imaging section” and “b) a second imaging section” with a telephoto lens identical to the one described in Kawamura.

In further comparison, the Court in *Axonics* noted that the title of the patent did not reflect the size-limitation, and the “Field of the Invention” section that mentioned the sacral nerve region “can readily be understood as identifying examples, not narrowing.” *Id.* at \*6. Here, the title of the ’408 patent, “Dual Aperture Zoom Digital Camera,” does not reflect any size-limitation and the Field of the Invention similarly recites only “[e]mbodiments” of the invention. Appx68. Each mention of a “thin camera” in the specification is also couched in similar non-limiting language. *See* Appx79, 3:37–38 (“In some embodiments, the lenses are thin.”), Appx80, 6:10–11 (“one embodiment of a lens block in a thin camera.”), Appx83, 12:41 (“In an embodiment, the camera is ‘thin.’”). The claims, therefore, are consistent with the specification and generic to cameras of any size.

Thus, to the extent Golan or Kawamura are limited by any size constraints at all—any such size constraints being the central basis of the Board’s decision and Corephotonics’s argument as addressed more fully in Section II below—they are irrelevant in any event. Whether a POSITA would have successfully scaled Kawamura’s lenses to the non-limiting example lens in Golan is equally irrelevant because *the claims at issue do not recite any size limitations*. “The proper inquiry is whether the relevant artisan would be motivated to make the combination to arrive at the claims’ actual limitations, which are not limited to the” specific contextual limitations of the prior art references. *Id.* at \*6. Because the Board’s Final Written Decision is tainted by its fundamentally erroneous emphasis on contextual factors (i.e., camera size) allegedly found in the prior art but not called for in the challenged claims, this Court should, at a minimum, vacate the faulty analysis and remand for consideration of the merits in light of the new guidance in this Court’s precedential *Axonics* decision.

## **II. The Board’s obviousness analysis relied on confining the asserted prior art reference, Golan, to a size limitation that also does not exist in Golan itself.**

### **A. Golan does not include a size limitation.**

Even if camera size were relevant to the challenged claims, Golan is not limited to a particular sized camera. Indeed, like the challenged claims of the ’408 Patent, Golan concerns a camera system for “[a] method for continuous electronic

zoom” provided using “multiple image devices each with a different fixed field of view (FOV).” Appx12 (citing Appx1198, Title). Golan’s zoom control system includes “a tele image sensor 110 coupled with a narrow lens 120 having a ... FOV 140 [and] a wide image sensor 112 coupled with a wide lens 122 having a ... FOV 142,” none of which are limited to a particular size, and no size limitations are included in the claims. Appx12–13 (citing Appx1199, FIG. 1, Appx1206–1207, ¶¶ 9, 26, 37), Appx1209–1210, claim 1.

Both Corephotonics and the Board cite to a single example in the Background Section of Golan as the sole support that Golan should be limited to miniature cameras. Appx33–35; Resp. 16 (citing Appx1206, ¶ 4), 38 (also citing Appx1206, ¶ 4 and stating “[i]n particular, that example of an image sensor is important evidence of what sensor sizes *might* be in the ‘light weight electronic zoom’ embodiments that Golan teaches.” (emphasis added)). The cited paragraph of Golan, however, merely refers to a non-limiting example of image sensor resolution (5 megapixels) provided for pedagogical purposes to explain the general concept of electronic zoom and how a ratio between the image sensor and an output resolution defines a maximal lossless electronic zoom for the sensor. *See* Appx1206, ¶ 4. Golan explains as follows:

In video streams (such as PAL, NTSC, SECAM, 656, etc.) the image resolution is known, and by using image sensors having substantially higher resolution, one can perform lossless electronic zoom. The ratio between the image sensor resolution and the output resolution dictates

the lossless electronic zoom range. *For example*, having a 5 Mega-pixel, 2592x1944, image sensor array and an output resolution frame of 400x300 yields maximal lossless electronic zoom of 6.48[.]

Appx1206, ¶ 4 (emphasis added). This example is not even mentioned in the Description of the Preferred Embodiments portion of Golan, or the claims, and cannot be seen as limiting Golan to any particular ratio of sensor resolution to output resolution, or any particular lens size or FOV. *See, e.g., Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1328 (Fed. Cir. 2002) (warning against limiting an invention to specific examples from the specification).

On appeal, Corephotonics cites to excerpts from deposition testimony of Apple's expert and related analysis applying a 3mm physical dimension for a 5-megapixel image sensor such as referenced in the Background of Golan (Appx1206, ¶ 4) as an example to show how it would be possible—using that example—to scale Kawamura to Golan. Resp. 4–6. But the quoted testimony is far from a concession that Golan is limited to a particular size, as Corephotonics now argues. On the contrary, immediately following the portion of testimony cited by Corephotonics (and omitted from Corephotonics's response), the expert explains that there could be numerous possibilities for scaling Kawamura to fit within Golan, all dependent upon the endless possibilities of sensor sizes. *See, e.g., Appx3390* (other possibilities

for scaling Kawamura to Golan would depend on the use of a “different sensor size”).

Further testimony during the same deposition (also omitted from Corephotonics’s Response) reinforced that the need for scaling between Kawamura and Golan would depend on and vary according to the image sensor.

Q So why might one skilled in the art have thought that modifications to Kawamura would have been needed in order to accommodate the teachings of Kawamura in the system of Golan?

A Well, a POSITA would look at Golan and would look at Kawamura and may use Kawamura to satisfy the needs of Golan in having telephoto lens. And *dependent on a given selected image sensor*, that person would scale the Kawamura lens to do – fill the sensor. Where it’s a small sensor or a large sensor, lenses scaling is typically done to adjust lenses for a given specification. In this case, it would be the dictated choice of sensor.

Appx3387, 46:3–15 (emphasis added).

Golan does not, on its face, limit its application to any particular size camera or image sensor. It is, therefore, legal error for the Board to limit Golan to miniature cameras.

**B. Corephotonics previously agreed that Golan is not limited by camera size in the way the Board found.**

Apple’s Opening Brief quoted Corephotonics’s statements both in Sur-Reply and at the oral hearing recognizing that Golan is not limited to miniature devices. *See*

Opening Br. 36–37 (citing Appx424 (Sur-Reply) and Appx632 (oral hearing)). Apple further explained the relevant context of the concessions. Appx37–39.

Corephotonics’s Response Brief fails to dispute or even address its Sur-Reply admission at all. Resp. 14–18. And while Corephotonics attempts to qualify its statements at oral argument as being limited to instances “where the optical zoom is not available” —a phrase included verbatim in Apple’s quote in the Opening Brief— this alleged qualification is irrelevant and does not diminish the substantive import of its admission in any way. Indeed, Corephotonics’s Response Brief “acknowledged that a POSITA would not see Golan’s system as requiring one specific image sensor resolution and size, to the exclusion of all other options, and Corephotonics explained that its arguments did not require limiting Golan in that manner.” Resp. 11 (citing Appx424). The Response further admits that “[f]or example, an even smaller sensor could be used, or perhaps a larger sensor that is still consistent with achieving Golan’s ‘light weight’ zoom.” Resp. 11 (citing Appx421).

Moreover, Corephotonics’s attempt to cabin Golan’s scope first to “only ... systems where optical zoom is not available” and, in turn, cabin the supposed set of systems where optical zoom is not available to “only . . . miniature camera systems” is without evidentiary support. *See* Resp. 16 (relying on unsubstantiated attorney argument at Appx632, 22:8–9, Appx631, 21:24–25). On one hand, Corephotonics

concedes that Golan could be used in any system, but on the other hand, argues that Golan can only be used in miniature systems. Thus, Corephotonics is advocating for a narrow reading of Golan that would limit its application solely to miniature cameras while at the same time disclaiming Golan’s teachings as being so narrow. *Compare* Resp. 11 (acknowledging Golan’s teachings should not be limited to miniature cameras) *to* Resp. 16 (characterizing Golan’s teachings as being “in fact limited to miniature camera systems”). These inconsistent positions mimic the errors in the Board’s findings, which justify reversal or, at a minimum, vacatur.

**C. Apple was not required to assume a non-existent size limitation in Golan and then explain why that limitation would not apply to show obviousness.**

Rather than defend the Board’s imposition of a burden on Apple to prove Golan does not teach away from Kawamura (*see* Opening Br. 42–44), Corephotonics suggests that the Board backed away from the presumption that Golan is limited to miniature devices in its decision on rehearing. *See* Resp. 18–20. That is incorrect. The Final Written Decision and Decision on Rehearing both rest on the relative size of the cameras disclosed in Golan and Kawamura and the presumption that Apple had a burden to show why a POSITA would have combined the two references despite the size differences. *See, e.g.*, Appx54 (Rehearing); Appx 26 (FWD); Appx34 (FWD); Opening Br. 29, 52.

To remove all doubt, the Decision on Rehearing quoted with approval the Final Written Decision’s finding that “there is insufficient evidence of record to support the proposition that Golan’s teachings are applicable to imaging systems that are of a scale larger than that of the miniature cameras and image sensors used in mobile devices.” Appx54 (Rehearing) (quoting Appx26 (FWD)); *see* Appx34 (FWD) (“[T]here is no disclosure or evidence that discloses that Golan’s teachings are applicable to larger-scale imaging systems, nor is there evidence of record that sufficiently supports a finding that a POSITA would have understood Golan’s teachings to be applicable to larger-scale imaging systems, such as those of the size able to accommodate a lens assembly of size [sic] disclosed in Kawamura.”); Appx34 (“[W]e determine that a POSITA would have understood [the terms ‘heavy,’ ‘expensive,’ and ‘lightweight’] to be relative to what is disclosed in Golan, which is a miniature digital camera, and correspondingly-sized image sensors . . . .”). The sentence on rehearing quoted in Corephotonics’s Response actually reinforces the fact that the Board focused exclusively on the relative size difference between the two references. *See* Resp. 18–19 (quoting Appx57) (“We clarify that we determine, instead, that a POSITA would not have understood Golan to teach or suggest image sensor arrays or imaging devices of a size compatible with that of the telephoto lens assemblies taught or suggested by Kawamura.”).



Corephotonics now attempts to explain away the Board's reliance on size by casting it as just part of the Board's analysis of Apple's motivation to combine the two references based on a common goal of achieving "light weight" electronic zoom capabilities. *See* Resp. 22–24. But this argument again highlights rather than dispels the error in the Board's reasoning. Golan and Kawamura need not seek to achieve "light weight" electronic zoom in the same manner, using the exact same technology (or, for that matter, with the same size cameras) for a POSITA to be motivated to combine the references. Rather, consistent with the "flexible approach" emphasized in *KSR* (550 U.S. at 415), a motivation to combine may be found in any number of ways, including "the interrelated teachings of multiple patents; any need or problem known in the field of endeavor at the time of invention and addressed by the patent; and the background knowledge, creativity, and common sense of the person of ordinary skill." *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (internal quotation marks and citation omitted). And it need not be the best or preferred option so long as the option is suitable. *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004).

Here, Golan and Kawamura were both trying to achieve a lighter weight camera. That they sought to achieve that goal at different points in time, using different technology, and from the starting point of different sized cameras does not

diminish the fact that there is a motivation, articulated in the record, to combine the references in the way suggested by Apple and its expert. *KSR*, 550 U.S. at 418. In holding that Apple did not meet its burden to prove a motivation to combine, the Board erroneously imposed an extra hurdle on Apple, requiring it not only to show that there was some basis in the art to look to the proposed combination but also to show why the differences in the art would not have discouraged a POSITA from making that combination—implicitly requiring Apple to prove that the references do not “teach away,” albeit without using that term expressly. The obviousness inquiry does not require such a showing and the Final Written Decision should, therefore, be reversed, or, at a minimum, vacated and the case remanded to the Board for an obviousness determination based on the proper legal standard.

**D. Corephotonics should be held to its “rich literature” statements.**

In addition to the size differences between Golan and Kawamura, Corephotonics supported its argument that a POSITA would not have looked to Kawamura because there was a “rich literature of miniature lens designs” in 2013. *See* Appx36 (FWD, discussing Corephotonics’s reference to “rich literature”). As outlined in Apple’s Opening Brief, however, this “rich literature” argument is not supported by evidence and is, in fact, contradicted by Corephotonics’s own positions taken in other proceedings. Opening Br. 48. Presented with its own contradictory

statements, Corephotonics's Response provides four excuses, none of which are legally or factually supportable.

First, Corephotonics suggests, without any evidentiary support, that the terms "portable terminal" and "miniature lens" may be different but does not explain what that difference might be. Resp. 31 ("The statements in the Korean case concerned telephoto lenses for a 'portable terminal,' not 'miniature lenses.'").

Second, it suggests that there may have been a "rich literature" for miniature telephoto lens designs at the time, but that there were very few of the specific telephoto lens size (6.5 mm) relevant to the Korean case. Resp. 32. Again, Corephotonics provides no support for this statement and instead simply asserts that possibility "can easily be true." *See* Resp. 32

Third, Corephotonics suggests that there is a "rich literature" in the United States while "hardly any" in Korea because of unspecified differences in American and Korean patent law. Appx662-663; *see* Resp. 32 ("The statements in the Korean brief also reflect Korean substantive law that differs from U.S. patent law."). Again, this statement is conjecture with no record support and no logical connection between the availability of literature in a nation and its patent laws.

Finally, Corephotonics speculates that the four references concerning miniature telephoto lenses from Apple's expert may comprise the "rich literature"

it contends exists in the United States. Resp. 33. This speculation, unsubstantiated by expert testimony, does not explain Corephotonics's contradictory position before the Korean patent office that a POSITA would not have been aware of such art. Appx680–710 (Korean Brief).

None of this unsubstantiated argument excuses Corephotonics's attempt to forward a position contradictory to its statements in another forum and undermines its argument that a POSITA would have looked to a wealth of information on miniature telephoto lenses, rather than Kawamura. Accordingly, the Board's refusal to consider these inconsistent positions further supports reversal, or at a minimum, vacatur and remand.

**III. The Board's obviousness analysis and Corephotonics's arguments improperly require physical incorporation of the features of Golan and Kawamura.**

The Board additionally erred by requiring physical incorporation of Golan and Kawamura, and Corephotonics's arguments to the contrary are unavailing. Corephotonics asserts that the Board did not impose any requirement of physical incorporation of the features of Golan and Kawamura (Resp. 34–35) yet Corephotonics and the Board cannot seem to avoid using physical incorporation to support their analysis. This is demonstrated again by Corephotonics's Response Brief in its arguments related to the incompatibility of the lenses absent scaling. *See*,

*e.g.*, Resp. 13 (“This difference [in size] was highly relevant both to whether Kawamura’s *unscaled lens* would have been *suitable for* Golan’s ‘light weight electronic zoom’ and to whether a POSITA would have scaled Kawamura’s lens as Apple proposed.”) (emphasis added); *see also* Resp. 18–19 (quoting Decision on Rehearing), Resp. 25, 46.

Trying to fit Kawamura’s lens into Golan’s camera *without* scaling is physical incorporation. *See In re Chevalier*, 500 F. App’x 932, 934 (Fed. Cir. 2013) (non-precedential) (rejecting “literal physical combination” of the prior art). But Corephotonics’s argument related to the incompatibility of the lenses even *with* scaling is also physical incorporation in essentially the same way by allowing only a minimal modification (lens scaling) while disallowing further modifications in view of the technical expertise and creativity of a POSITA as shown in the following examples:

- “Kawamura’s lens would need to be scaled down by a factor of at least 14x *to work with* Golan’s 5 megapixel sensor.” Resp. 30–31 (emphasis added).
- “Likewise, the difficulties posed by scaling a lens such as Kawamura by the large factor *required to fit into* Golan’s camera are highly relevant to whether a POSITA would have been motivated to make such a scaling.” Resp. 34 (emphasis added).
- “[T]he lens prescriptions taught by Kawamura . . . would need to be scaled *to fit* Golan.” Resp. 36 (emphasis added).

Corephotonics's argument is incorrect because (1) a POSITA is a person of ordinary creativity and (2) the obviousness inquiry addresses combining *teachings* of prior art references, not physical components or features.

First, Corephotonics's arguments portray a POSITA as an automaton, without any creativity or specialized skill, who attempts to copy Kawamura's lens exactly, scale it down, and insert it into Golan's camera, hoping it fits. *See* Resp. 26–28. This is contrary to well-established law. *See KSR*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). This Court has explained that “the motivation-to-combine analysis ‘need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.’” *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (quoting *KSR*, 550 U.S. at 418).

Second, this Court has explained that the proper obviousness analysis involves the combination of *teachings* and *principles* from prior art references, not physical components or features themselves. *See In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (The obviousness inquiry does not ask “whether the references could be physically combined but whether the claimed inventions are rendered obvious by the *teachings* of the prior art as a whole.” (emphasis added)). In this case,

the Board ignored Apple's evidence and expert testimony showing that a POSITA would understand how to apply the *teachings* of Kawamura (a telephoto lens with 5 axially-aligned lenses, with a positive first lens, negative second and fourth lenses, and a particular separation of the 4th and 5th lenses) with the *teachings* of Golan to achieve Kawamura's stated benefits of increased image quality while maintaining certain size constraints. *See* Opening Br. 35, 62–63.

Corephotonics successfully convinced the Board to ignore both (1) the POSITA's technical expertise and creativity and (2) the *teachings* of the prior art references and focus exclusively on the physical compatibility or incompatibility of the components themselves. This reasoning thus required physical incorporation, with or without lens scaling, which is legally erroneous and warrants reversal, or at least vacatur and remand.

#### **IV. The Board did not address Apple's grounds for the combination of Golan and Kawamura.**

In its Opening Brief, Apple identified four independent grounds for why a POSITA would have been motivated to combine Golan and Kawamura. *See* Opening Br. 61–64. The Board failed to address any of them. Instead, it focused on a (nonexistent) size limitation in Golan. Corephotonics's Response, which purports to outline the ways in which the Board responded to these grounds, actually further illustrates the deficiencies in the Board's analysis.

First, Apple asserted that a POSITA would be motivated to combine the references to achieve the benefit of creating “a tele lens with a compactness of an overall length while having an excellent image-formation performance.” Opening Br. 61–62. In Response, Corephotonics argues that, even if the Board had addressed this ground for combination, it is not sufficient because “[e]stablishing motivation to combine must require more than a simple recitation of the benefits of the prior art references.” Resp. 41–42. But this is not the standard. Indeed, *KSR* explicitly rejected the notion that “some motivation or suggestion to combine the prior art teachings” must be found expressly and solely “in the prior art” itself. 550 U.S. at 407 (internal quotations omitted). Rather, the obviousness inquiry is “an expansive and flexible approach” that encompasses a wide variety of considerations, including the “interrelated teachings of multiple patents” and the “background knowledge possessed by a person having ordinary skill in the art.” *Id.* at 415, 418. Apple’s first ground for obviousness emphasizes these interrelated teachings, which the Board failed to consider.

Indeed, although Corephotonics argues that the Board actually did address this first ground, it’s only support for this statement is to repeat the Board’s same erroneous size-difference rejection. Resp. 42–43 (citing Appx36–37) (“[T]he Board stated that it was ‘not persuaded that a POSITA would have scaled the Kawamura



lens prescriptions to fit into a digital camera of Golan.’” (internal quotations omitted)).

Second, Apple argued that Golan and Kawamura are “in the same field of endeavor [and] address[] deficiencies in optical lenses.” Opening Br. 62–63. In Response, Corephotonics suggests that Apple’s petition failed to assert overlapping goals between Golan and Kawamura. Resp. 43. This statement is contradicted by the Petition, which addresses the dual goals of Golan and Kawamura and summarizes those goals by explaining that “providing a compact and light weight imaging system with excellent image performance is a need or a goal shared by Golan and Kawamura, and provides at least one reason to combine the respective teachings.” Appx189 (Petition).

Corephotonics further argues that Kawamura’s objective to “keep[] length to a conventional level” does not state an objective to maintain compact lens size. *See* Resp. 43. This argument should have been (but was not) considered first by the Board, but the argument lacks merit in any event. As Apple’s petition articulated and its expert explained, “[s]imilar to Golan, an objective of Kawamura is to provide a telephoto lens that ‘keeps a **compactness of an overall length** to a conventional level of a telephoto ratio of about 0.96 to 0.88 but has **an excellent image-formation**

**performance.’”** Appx188 (Petition) (citing Appx1299 (Kawamura, 1) and Appx1133–1134 (Sasián Dec. ¶ 62) (emphasis in Petition).

Then, Corephotonics repeats the same size-difference argument erroneously relied on by the Board to distinguish Golan as also addressing this second ground. *See* Resp. 44 (“[T]he Kawamura lens was not ‘light weight’ in the sense of Golan.”). But this again raises the wrong question. Whether Kawamura achieves compactness or is light weight “in the sense of Golan” is not the question. Rather, the appropriate question is whether Kawamura has an objective relative to the claimed invention so that one skilled in the art would be motivated to look to it as part of the solution. *See supra* at 1–5, 13. That question was not addressed by the Board and, at a minimum, requires remand for further consideration. Opening Br. 62–67.

Third, Apple argued that Kawamura’s telephoto lens provides “‘a relatively large field of view and little vignetting.’” Opening Br. 63 (quoting Appx1134–1135, ¶ 63 (Sasián Decl.)). In Response, Corephotonics criticizes the third ground as conclusory. Resp. 44–45. This is incorrect. This ground is clearly explained by the testimony of Dr. Sasián (Appx1134, ¶ 62 (Sasián Decl.)), and the proper obviousness inquiry does not require reasons for combination to be explicitly listed in the prior art. *KSR*, 550 U.S. at 415. Then, tacitly admitting that the Board did not address Apple’s third ground, Corephotonics suggests that the Board’s catch-all generic

statement that all of Apple’s reasons for combination were “‘insufficient to support a conclusion of obviousness’” adequately addresses Apple’s third ground, but that statement fails to address or analyze any specific argument. Resp. 45 (quoting Appx37).

Finally, Apple argued that the combination would produce predictable results. Opening Br. 63–64. Corephotonics’s Response fails to substantively address this ground, as it points yet again to the Board’s size-difference argument. Resp. 45–46 (quoting Appx63) (Apple “doesn’t explain why a POSITA would think Kawamura was small enough or should be scaled to be small enough to be compatible with Golan’s invention.”). But again, whether Kawamura fits within Golan was the wrong analysis. *See supra* at 21.

As explained in Apple’s Opening Brief, the Board summarily dismissed all of Apple’s grounds for motivation to combine Golan and Kawamura with its single faulty (erroneous) objection to the relative size differences between Golan and Kawamura. *See* Opening Br. 65–67. The Board never addressed the substance of any of these grounds as it was required to do and Corephotonics’s attempt to recast the size-difference finding as addressing each of those grounds cannot mask the deficiency.

## CONCLUSION

For the reasons above, the Court should reverse the Board's Decision as contrary to this Court's ruling in *Axonics*, hold that a POSITA would have been motivated to combine Golan and Kawamura based on the grounds presented, hold claim 5 unpatentable as obvious, and remand for the Board to analyze the parties' arguments regarding claim 6. Alternatively, the Court should reverse, vacate, and remand for further proceedings as to both challenged claims.

Respectfully Submitted,

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